

Worksheet 2: Our Energy Resources Project

What does the project involve?

Your group must select one energy resource and investigate different aspects of that resource, though the internet, the STELR website, and, where possible, from experts in the field. Your group will be allocated a different energy resource by your teacher. You will then investigate this resource and give a presentation about that energy resource to the class.

Suitable energy resources include:

- Solar (photovoltaic) panels for generating electricity
- Solar thermal power stations
- Geothermal power stations
- Biogas for generating electricity and producing heat energy
- A biofuel used for transport (such as bioethanol or biodiesel)
- Wave power
- Coal-fired power stations
- Solar heating
- Wind turbines
- Hydroelectric power stations
- Petrol for transport
- Tidal power
- Nuclear power stations
- Gas-fired power stations

What do we need to find out about our energy resource?

You need to find out (where the information is available):

1 What is the science and technology behind the resource?

- How does this energy resource work? What devices are used?
- What are the main energy transformations and energy transfers that take place? (This should include a flow chart showing the energy transformations that occur.)
- Is this energy resource classified as renewable or non-renewable, and why?

2 How is the energy resource used?

- Is this energy resource used in Australia, and if so, to what extent? (Is it a large-scale energy resource, or just used on a small scale? Where in Australia is it used – across most of Australia, or just in a small part of Australia?)
- Is this energy resource used across the world and if so, to what extent? Which countries are the main ones using it? Is there a reason why some countries are using it and others are not?

3 What are the benefits and problems associated with this energy resource?

- What are the main advantages of using this energy resource? Will increased use of the resource help reduce global warming?
- What health and safety concerns are associated with this energy resource?
- What environmental concerns are associated with this energy resource?

4 What does your community think about this resource?

- What are the views of members of your school and/or local community on the setting up and using the energy resource to supply electricity or other useful forms of energy, especially if it were to be established nearby?

5 What is the likely future of the resource?

- Is the energy resource likely to be a useful and widely used energy source for Australia and across the world in the future? Why?

You also may think of other questions that suit your energy resource.

Resources

- See the student portal of the STELR website at www.stelr.org.au for a list of useful websites.
- See the renewable energy tab of the STELR website for extra information about different renewable energy resources.

How do we present our project?

You should consider a range of ways of communicating your information that will capture the interest of your audience. Here are some examples:

- Digital images
- Diagrams, models, flow charts and maps
- Tables and graphs of data
- Website capture
- Video clips
- Posters
- Your own recordings of interviews and site visits
- PowerPoint presentation

How will the project be assessed?

See the assessment document provided by your teacher.